

***PSEUDOTSUGA MENZIESII* - *JUNIPERUS SCOPULORUM* /
FESTUCA (ROEMERI or *RUBRA)* -
*ASPIDOTIS DENSE***

Douglas-fir - Rocky Mountain juniper / fescue - Indian's dream

Abbreviated Name: PSME-JUSC/FEST-ASDE

Synonym: *Pseudotsuga menziesii* - *Juniperus scopulorum* /
Festuca (idahoensis or *rubra)* - *Aspidotis densa*

Sample size = 8 plots

DISTRIBUTION: Occurs only on a few islands in western Skagit County. Best developed on Cypress Island.

GLOBAL/STATE STATUS: GNRS1. Less than 5 occurrences exist in a very small global range. Continuing increase in density of these woodlands is probably a threat in some areas.

ID TIPS: Open canopy Douglas-fir. Understory dominated by Roemer's or red fescue. Rocky Mountain juniper or Indian's dream present. Occurs almost exclusively on serpentine soils.

ENVIRONMENT: Sites are dry to very dry and relatively nutrient-poor. Occurs mostly on serpentine-influenced soils. Slopes tend to be southerly or westerly. Parent materials can include colluvium, residuum, and possibly glacial till (latter would be mixed with one of former). Soils are probably quite shallow under existing stands.

Precipitation: 27-30 inches

Elevation: 150-1350 feet

Aspect/slope: SE to NW; 35-60

Slope position: upper, mid, ridgetop

Soil series: Guemes, dystic xerochrepts, lithic haploxerols

Special: Serpentine

DISTURBANCE/SUCCESSION: Tree density has increased with fire suppression and may be continuing to increase in some of these woodlands. Probably was more extensive in pre-Western settlement landscape than currently, due to more frequent fires. Shallow and harsh soils probably help limit pace of succession toward forest in absence of fire. Heavy deer browsing on some islands probably retards tree establishment and growth, and therefore succession to forest, as well.

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Vegetation Composition Table (selected species):

Con = constancy, the percent of plots within which each species was found;

Cov = cover, the mean crown cover of the species in plots where it was found.

Trees	Kartesz 2003 Name	Con	Cov
Douglas-fir	Pseudotsuga menziesii var menziesii	100	31
Rocky Mountain juniper	Juniperus scopulorum	88	9
lodgepole pine	Pinus contorta var. contorta	75	8
Pacific madrone	Arbutus menziesii	63	16
Shrubs, Subshrubs			
baldhip rose	Rosa gymnocarpa	75	3
tall Oregongrape	Mahonia aquifolium	75	2
hairy honeysuckle	Lonicera hispidula	50	3
Graminoids			
blue wildrye	Elymus glaucus	100	8
early hairgrass	Aira praecox	75	4
red fescue	Festuca rubra	63	21
California brome	Bromus carinatus	63	3
Roemer's fescue	Festuca roemerii	50	20
western fescue	Festuca occidentalis	50	11
prairie junegrass	Koeleria macrantha	38	6
silver hairgrass	Aira caryophyllea	38	2
wood-rush	Luzula (comosa, multiflora ssp. multiflora)	38	1
Forbs and Ferns			
Indian's dream	Aspidotis densa	75	4
yarrow	Achillea millefolium var. occidentalis	63	2
meadow death camas	Zigadenus venenosus var. venenosus	63	1
western starflower	Trientalis borealis ssp. latifolia	50	1
early blue violet	Viola adunca var. adunca	38	2
Hooker's onion	Allium acuminatum	35	+
field chickweed	Cerastium arvense ssp. strictum	25	4
Wallace's selaginella	Selaginella wallacei	25	3
woolly sunflower	Eriophyllum lanatum var. lanatum	25	+
common strawberry	Fragaria virginiana ssp. platypetala	25	+
Pacific sanicle	Sanicula crassicaulus	25	+

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Plot locations
of PSME-JUSC/FEST-ASDE
in the Puget Trough

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VEGETATION: Woodland or open forest dominated by Douglas-fir. Rocky Mountain juniper is usually present as a small tree. Lodgepole pine and Pacific madrone are often present and can occasionally be co-dominant. The understory is dominated or co-dominated by the grasses Roemer's and/or red fescue. The nativity of red fescue in this habitat is uncertain. Blue wildrye is consistently present. Western fescue is prominent in half the plots. Other herbs usually present include Indian's dream (a fern), California brome, yarrow, early hairgrass, and death camas. Shrubs are usually present only in small amounts, with tall Oregon grape and baldhip rose being frequent.

CLASSIFICATION NOTES: This association has not been previously described and is not recognized by NatureServe (2004).

MANAGEMENT NOTES: In areas without heavy deer browse on Douglas-fir seedlings and saplings, it may be necessary to remove small Douglas-fir in order to maintain or restore woodland with herbaceous understory. Care should be taken to avoid disturbances so intense that they facilitate loss of native understory or massive increase of non-native herbs. Prescribed burning is a management tool that merits further research and evaluation.

BIODIVERSITY NOTES: Some of the plant species found on serpentine soils may have developed unique physiological and/or genetic adaptations to the chemical and hydrologic stresses of those soils. There are two vascular plant species in the Puget Trough, Rocky Mountain juniper and Indian's dream, that the data indicate are more common on these soils than elsewhere, and there may be other vascular or non-vascular species with a similar occurrence pattern.